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10/681,322

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Shinichi Ueda

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EXAMINER

NGUYEN, NAM V

ART UNIT

PAPER NUMBER

2612

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/681,322

Applicant(s)

UEDA ET AL.

Examiner

Nam V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 7-19 is/are rejected.
- 7) ☒ Claim(s) 3-6 and 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

This communication is in response to applicant's Amendment which is filed February 1, 2007.

An amendment to the claim 8 has been entered and made of record in the application of Ueda et al. for a "radio type locking/unlocking device" filed October 09, 2003.

Claims 1-15 are pending.

Response to Arguments

Applicant pointed out that the rejection of claims 6/1-8 is improper because claim 6 does not depend from claims 6-8. See new art rejections as discussed below.

Applicant's argument to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C § *102(e) and 103(a)* as discussed below. Applicant's argument with respect to the pending claims 1-15, filed February 1, 2007, have been fully considered but they are not persuasive for at least the following reasons.

On page 10, second paragraph, Applicant's arguments with respect to the invention in Furuta et al. does not teach or suggest that a position detector for detecting the position of the

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portable unit depending on whether or not the response signal received by the vehicle side receiver coincides with ID information stored in the vehicle is not persuasive.

As defined by claim 7, the microcomputer 207 of Furuta et al. determines whether or not the card 1 exists within the vehicle compartment based on whether or not the response signal is detected. The microcomputer 207 further determines at step S3 whether the vehicle door is closed. With the YES determination (closed door), the microcomputer 207 determines at step S4 whether the card 1 is on the card holding case 3. With the NO determination (no card), the microcomputer 207 determines at step S8 whether the door is locked. The YES determination (locked door) together with the foregoing determinations indicates that the driver is outside the vehicle such as before entering the vehicle (column 4 lines 22 to 30; see Figure 4). The microcomputer 207 further determines that the ID of the card is certified the ID code of the card 1 valid or not (see Step S6 of Figure 4). If the ID code of the card 1 is valid then the microcomputer 207 stop transmits an interior radio signal (see Step S7 of Figure 4). Clearly, the microcomputer 207 determines the exact location of the valid card 1 depending on the card 1 has the valid ID code or not. The microcomputer 207 also determines whether or not the card 1 inside vehicle or outside of the vehicle, if the valid card is detected inside the vehicle then the microcomputer 207 will stop transmitting the interior radio signal as the features of the Claim 7 and in part of Claim 1.

On page 12, second paragraph, Applicant's arguments with respect to the invention in Furuta et al. does not teach or suggest that an all-door closing detector as recited in Claim 1.

Furuta et al. disclose a locking/unlocking control unit 2 includes a pair of transmitter/receiver circuits 201, 203 of 2.45 GHz and antennas 202, 204. It further includes a receiver circuit of 400 MHz, an antenna 206, a microcomputer 207 and an output circuit 208 for switching the locking and unlocking of vehicle doors (column 3 lines 11 to 17; see Figure 1). The microcomputer 207 of Furuta et al. is connected to various detectors devices which including a courtesy switch 210 for detecting opening and closing of the door (column 3 lines 63 to 67; see Figure 1). The microcomputer 207 determines whether or not the door is open. The microcomputer 207 continues to check the door actually open or not if the unlock signal is received to unlock the door (column 5 lines 10 to 24; see Figure 4). Clearly, using the switch 210 to detect opening or closing of all the doors of a vehicle. Furthermore, Furuta et al. disclose not limited to doors in a vehicle but also are applied to other doors as in buildings or the like (column 7 lines 10 to 13). Clearly, Furuta et al. disclose a plurality of doors and not a single door of the vehicle.

Furthermore, last paragraph on page 12, Applicant's arguments with respect to the invention in Furuta et al. does not teach or suggest that the controller prohibits an output of the locking signal as recited in Claim 1. Applicant's argument with respect to the pending claim 1, filed February 1, 2007, are persuasive. Therefore the examiner has withdrawn the rejections of Claims 1-6.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 7-8 and 13-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Furuta et al. (US# 6,218,929).

Referring to claim 7, Furuta et al discloses a door entry control by wireless communication as recited in claim 7. See Figures 1 to 4 and respective portions of the apparatus and method.

Furuta et al discloses a wireless locking/unlocking device (i.e. a door entry control system) (column 2 lines 5 and 21; see Figure 1) comprising:

transmitter (203) (i.e. a transmitter/receiver circuit) for sending a request signal (i.e. an interior radio signal) within the vehicle compartment (i.e. an interior area) (column 5 lines 24 to 31; see Figures 1 and 4);

receiver (203) (i.e. a receiver of a transmitter/receiver circuit) for receiving the response signal (i.e. a return signal) sent from a portable unit (1) (i.e. a card) which receives the request signal (column 5 lines 31 to 36); and

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determining means (207) (i.e. a microcomputer) which determines whether or not the portable unit (1) exists within the vehicle compartment (i.e. the interior area) based on whether or not the response signal is detected (column 5 lines 36 to 38),

wherein if it is determined that the portable unit (1) exists within the vehicle compartment, sequent transmission of request signals is prohibited (Step S7) (column 5 lines 36 to 42; see Figure 4).

Referring to claim 8, Furuta et al. discloses a wireless locking/unlocking device for a vehicle, to the extend of Claim 7 above, and further including:

a closing timing detector for detecting that the opening/closing body is just closed, wherein the transmitter sends a request signal to the vehicle compartment in response to closing of the opening/closing body detected by the closing timing detector. In order to detect the door can be locked, the door has to be closed and detecting the door locking has been occur implied that the door is closed (column 5 lines 10 to 24; column 3 lines 65 to column 4 line 2; see Figure 4).

Referring to claim 13, Furuta et al. discloses a wireless locking/unlocking device according to claim 8, Furuta et al. disclose wherein the transmitter prohibits sending of the request signal (i.e. step 7 of stop interior radio signal) in response to an operation signal (i.e. an engine stop S2) of a switch disposed within the vehicle compartment (column 3 lines 63 to column 4 line 2; column 5 lines 36 to 60; see Figures 1 and 4)

Referring to claim 14, Furuta et al. discloses a wireless locking/unlocking device according to claim 8, Furuta et al. disclose the microcomputer detecting the door closed or not, if it is closed, and the valid card is interior, the transmitter prohibits sending of the request signal corresponding to a detection of a door closed (column 5 lines 36 to 60; see Figure 4).

Referring to claim 15, Furuta et al. discloses a wireless locking/unlocking device according to claims 8, Furuta et al. disclose a microcomputer has a predetermine time period to start time counting in response to the automatic door unlocking operation to verify whether the door is open or not until time the predetermined time period (column 5 lines 10 to 24; see Figure 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furuta et al. (US# 6,218,929) in view of Dais et al. (US# 6,624,741).

Referring to claim 1, Furuta et al. discloses a wireless locking/unlocking device for a vehicle, to the extend of Claim 7 above, and further including:

position detector (3) (i.e. a holding case) for detecting the position of the portable unit (1) depending on whether or not the response signal (i.e. a return signal) received by the vehicle side receiver (203) coincides with ID information (i.e. an ID code) stored in the vehicle (column 5 lines 36 to 40; see Figures 1 and 4);

controller (207) for outputting a locking signal based on a detection result of the position detector (3) (column 5 lines 43 to 60; see Figures 1 and 4); and

an actuator (208) for bringing a door lock mechanism into locking state in response to the locking signal (column 5 lines 57 to 60; see Figure 1);

a door closing detector (211) which detects that all the doors are closed after a condition that at least one door is open and generates a door closing detecting signal (column 3 lines 63 to 67), wherein the vehicle side transmitter (203) sends the request signal in response to the all-door closing detecting signal (211) and if it is detected that the portable unit (1) exists within the vehicle compartment by the position detector (3), stops sending of sequent request signals (column 5 lines 36 to 42; see Figures 1 and 4).

However, Furuta et al. did not explicitly disclose that if it is detected that the portable unit exists within the vehicle compartment by the position detector, the controller prohibits an output of the locking signal.

In the same field of endeavor of vehicular electronic key system, Dais et al. teach that if a vehicle locking system is detected that an authentication element exists within the vehicle interior compartment, locking signal is prohibited (column 4 lines 64 to column 5 line 28; see Figure 1) in order to avoid accidentally left the authentication element in the interior of the vehicle.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize prohibiting locking signal if the authentication element exists within the vehicle interior compartment taught by Dais et al. an automatic door locking and unlocking of a vehicular entry control system of Furuta et al. because avoiding locking condition if the authentication element exist in the interior of vehicle would avoid accidentally left the authentication element in the interior of the vehicle.

Claims 2, 9 and 9/13 to 9/15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuta et al. (US# 6,218,929) in view of Dais et al. (US# 6,624,741) as applied to Claims 1 and 8, and in further in view of Onuma et al. (US# 6,798,337).

Referring to claim 2, Furuta et al. in view of Dais et al. discloses a wireless locking/unlocking device to Claim 1, however, Furuta et al. in view of Dais et al. did not explicitly disclose wherein the vehicle side transmitter sends the request signal to a predetermined zone within the vehicle compartment and a predetermined zone around the vehicle alternately and repeatedly multiple times.

In the same field of endeavor of vehicular electronic key system, Onuma et al. teach that a vehicle side transmitter (2 to 4) sends the request signal to a predetermined zone within the vehicle compartment (i.e. an interior) and a predetermined zone around the vehicle (i.e. around the doors) alternately and repeatedly multiple times (column 7 lines 41 to 49; column 8 lines 52 to 25; see Figures 1, 5 and 10) in order to output a warning signal mislaying electronic key to the user.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize the need for sending a request signal to a predetermined zones multiple times taught by Onuma et al. an automatic door locking and unlocking of a vehicular entry control system of Furuta et al. in view of Dais et al. because sending a request signal to a predetermined zones multiple times would improve a reliable communication and certainly lock and unlock door operation of a door entry control system.

Referring to claim 9, Furuta et al. in view of Dais et al. discloses a wireless locking/unlocking device to Claim 8, Onuma et al. disclose wherein when a response signal responding to the request signal sent within the vehicle compartment is not received, the transmitter sends a request signal to a predetermined zone (i.e. area 42 or 44) around the vehicle intermittently and the opening/closing body (i.e. 40 or 43) is locked under a condition that the response signal responding to the request signal sent to the predetermined zone is not received (column 3 lines 54 to 65; column 6 lines 52 to 67; see Figures 5 and 7A) in order to verify all the area of the vehicle. Therefore, it would have been obvious to a person of ordinary skill in the art to recognize the need for sending a request signal around the vehicle taught by Onuma et al. an automatic door locking and unlocking of a vehicular entry control system of Furuta et al.

Referring to claims 13/9 to 15/9, Furuta et al. in view of Dais et al. and in view of Onuma et al. discloses a wireless locking/unlocking device to Claim 9, the claims 13/9 to 15/9 already addressed above therefore claims 13/9 to 15/9 are also rejected for the same obvious reasons given with respect to claim 9.

Allowable Subject Matter

Claims 3-6 and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claim 3, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations a second vehicle side transmitter for, after the position of the portable unit is detected by the position detector based on the request signal, sending the request signal to the predetermined zones within the vehicle compartment and around the vehicle; and second position detector for detecting the position of the portable unit depending on whether or not the response signal in response to the request signal sent by the second vehicle side transmitter coincides with ID information inherent of the vehicle, wherein the second vehicle side transmitter, if it is detected that the portable unit does not exist within the vehicle compartment by the position detector, sends the request signal to the predetermined zones within the vehicle compartment and around the vehicle intermittently and the controller, if it is detected that the portable unit does not exist at least outside the vehicle by the second position detector when it is detected that the portable unit does not exist within the vehicle compartment by the position detector, outputs the locking signal.

Referring to claim 6, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations a door opening detector for

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detecting a change of state that at least one of vehicle doors is changed from its closing state to its opening state; third vehicle side transmitter for sending the request signal to the predetermined zones within the vehicle compartment and around the vehicle in response to the door opening state detected by the door opening detector; and third position detector which detects the position of the portable unit in response to the door opening state detected by the door opening detector depending on whether or not the response signal coincides with ID information stored in the vehicle, wherein the vehicle side transmitter, if the third position detector detects an existence of the portable unit within the vehicle compartment and around the vehicle, sends the request signal to at least the predetermined zone within the vehicle compartment.

Referring to claim 10, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations wherein when the response signal responding to the request signal sent within the vehicle compartment is not received, the transmitter sends the request signal to a predetermined zone around the vehicle intermittently, wherein and if the response signal responding to the request signal sent to the predetermined zone is not received, the transmitter sends the request signal again to the vehicle compartment, and the opening/closing body is locked under a condition that the response signal responding to the request signal sent again within the vehicle compartment is not received.

Referring to claim 11, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations disclose further comprising opening timing detector for detecting that the opening/closing body is just opened, wherein the

transmitter sends the request signal to predetermined zones within the vehicle compartment and around the vehicle in response to opening of the opening/closing body detected by the opening timing detector and under a condition that the response signal responding to the request signal sent to the predetermined zones within the vehicle compartment and around the vehicle is received, sends the request signal to the vehicle compartment in response to closing of the opening/closing body.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Weigl et al. (US# 5,969,597) disclose a method for preventing misuse of transponders left inside a vehicle.

Stippler (US# 6,218,932) discloses an antitheft device for a motor vehicle and method for operating the antitheft device.


Morillon et al. (US# 6,522,027) disclose a hand-free access and/or engine starting system for automobile vehicles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V Nguyen whose telephone number is 571-272-3061. The examiner can normally be reached on Mon-Fri, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Brian Zimmerman can be reached on 571- 272-3059. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nam Nguyen
April 29, 2007



BRIAN ZIMMERMAN
PRIMARY EXAMINER